

CLAIMS

What is claimed is:

- 1 1. A method of providing information to a user through a control device, the
2 method comprising:
3 receiving an event signal indicating an occurrence of an event; and
4 responsive to receiving the event signal, generating a notification signal within the
5 control device to notify the user that the event has occurred.
- 1 2. The method of claim 1, wherein generating the notification signal comprises:
2 providing the user with a visual indication on the control device that the event has
3 occurred.
- 1 3. The method of claim 2 wherein the visual indication comprises illuminating a
2 light source on the control device.
- 1 4. The method of claim 3 wherein the light source blinks to indicate that the
2 event is urgent.
- 1 5. The method of claim 1, wherein generating the notification signal comprises:
2 providing the user with an audio indication on the control device that the event has
3 occurred.
- 1 6. The method of claim 1, wherein generating the notification signal comprises:
2 providing the user with a vibratory indication on the control device that the event has
3 occurred.
- 1 7. The method of claim 1, wherein generating the notification signal comprises:

2 providing the user with a tactile indication on the control device that the event has
3 occurred.

1 8. A method for notifying a computer user of occurrence of an event, the method
2 comprising:

3 communicating from a host computer to a control device that the event has occurred,
4 the control device having a region on its surface for an alterable texture; and
5 responsive to the communication from the host computer, altering the texture on the
6 region on the surface of the control device to notify the user that the event has
7 occurred.

1 9. The method of claim 8, wherein altering the texture comprises:
2 raising a plurality of pegs through a plurality of apertures in a surface of the control
3 device.

1 10. The method of claim 9, wherein raising the plurality of pegs comprises:
2 rotating an actuator to push a lever which is communicatively coupled to the plurality
3 of pegs.

1 11. The method of claim 10, wherein the actuator is of electromagnetic type.

1 12. The method of claim 11, wherein the electromagnetic actuator is bi-stable.

1 13. The method of claim 10, wherein the actuator is a solenoid.

1 14. The method of claim 9, wherein the plurality of pegs is in a grid shape.

1 15. The method of claim 9, wherein the plurality of pegs is in a quincunx shape.

1 16. The method of claim 8, wherein the control device is a mouse.

1 17. A method for notifying a computer user of occurrence of an event, the method
2 comprising:

3 communicating from a host computer to a mouse that the event has occurred, the
4 mouse having a region on its surface for an alterable texture; and

5 responsive to the communication from the host computer, altering the texture on the
6 region on the surface of the mouse to notify the user that the event has
7 occurred, wherein altering the texture comprises raising a plurality of pegs
8 through a plurality of apertures in the region on the mouse.

1 18. A system for notifying a computer user of an occurrence of an event by
2 changing the texture of a region on the control device being used by the user, the system
3 comprising:

4 a plurality of pegs in the region on the control device for changing the texture of the
5 control device; and
6 an actuator module for controlling the plurality of pegs.

1 19. A system for notifying a computer user of an occurrence of an event by
2 changing the texture of a region on the control device being used by the user, the system
3 comprising:

4 a key plate on the region of the control device; and
5 a pegs plate comprising a plurality of pegs, a portion of which can protrude through
6 the key plate to change the texture of the region on the control device

1 20. A system for notifying a computer user of an occurrence of an event by
2 changing the texture of a region on the control device being used by the user, the system
3 comprising:

4 a key plate on the region on the control device;

5 a pegs plate comprising a plurality of pegs, a portion of which can protrude through
6 the key plate to change the texture of the region on the control device;
7 a lever communicatively coupled to the pegs plate to reposition the pegs plate with
8 respect to the key plate;
9 a cam communicatively coupled to the lever for manipulating the lever; and
10 an actuator module communicatively coupled to the cam for rotating the cam.

1 21. The system of claim 20 wherein the actuator module is bi-stable.

1 22. The system of claim 20 wherein the actuator module comprises a solenoid.

1 23. The system of claim 20 wherein the lever is flexible.

1 24. The system of claim 20 wherein the pegs plate comprises a plurality of pegs in
2 a grid shape.

1 25. The system of claim 20 wherein the pegs plate comprises a plurality of pegs in
2 a quincunx configuration.

1 26. A system for notifying a computer user of an occurrence of an event by
2 changing the texture of a region on the control device being used by the user, the system
3 comprising:

4 protruding means in the region on the control device for changing the texture of the
5 control device; and
6 actuator means for controlling the protruding means.

1 27. A system for notifying a computer user of an occurrence of an event by
2 changing the texture of a region on the control device being used by the user, the system
3 comprising:

4 alterable means on the region of the control device for altering the texture of the
5 region on the control device; and
6 protruding means for protruding through the alterable means on the region of the
7 control device.

1 28. A computer program product for storing a program for permitting a computer
2 to perform a method of providing information to a user through a control device, the method
3 comprising:

4 receiving an event signal indicating an occurrence of an event; and
5 responsive to receiving the event signal, generating a notification signal within the
6 control device to notify the user that the event has occurred.

1 29. A computer program product for storing a program for permitting a computer
2 to perform a method for notifying a computer user of occurrence of an event, the method
3 comprising:

4 communicating from a host computer to a control device that the event has occurred,
5 the control device having a region on its surface for an alterable texture; and
6 responsive to the communication from the host computer, altering the texture on the
7 region on the surface of the control device to notify the user that the event has
8 occurred.